"We're Reducing Risks"

The SNF Project's Path Forward

Essentially, our mission is to:

- Build nearly $800 million in unique, new equipment and facilities
- Retrieve and clean the fuel
- Dry the fuel
- Safely store fuel away from the Columbia River
- Dispose of the contaminated sludges and hardware

Steps of the path forward:

- Modify two old facilities to retrieve, clean and package fuel while protecting Hanford workers

- Construct a complicated and unique set of new fuel processing equipment and two new processing and storage facilities
  - About 95 percent of equipment needed to begin fuel removal has been constructed

- Retrieve and clean the fuel
  - Pick up and wash fuel elements in specially designed, remote, underwater Fuel Retrieval System
    -includes opening old fuel canisters in K West Basin
  - Inspect, sort and load fuel into steel baskets

Low-cost, low-maintenance stack being erected to cool the Canister Storage Building, 1998

The SNF Project Path Forward (continued)

- **Load fuel baskets into high-strength containers (Multi-Canister Overpacks, or MCOs)**
  - MCOs are in heavily shielded transport casks
  - Underwater, remote in-basin operations
- **Move MCOs (in shipping casks) to new Cold Vacuum Drying Facility**
- **Dry fuel using special, first-of-its-kind processing equipment in Cold Vacuum Drying Facility**
  - Drying is done inside cask, to protect workers and eliminate load/unload operations
  - Test fuel to verify it is sufficiently dry to store safely
- **Move MCOs (inside casks) to Canister Storage Building**
  - 9 Miles from the Columbia River
  - Heavily shielded nuclear facility designed to safely store fuel 40+ years
  - Remove MCOs from casks and place into tubes in below ground vaults
  - 220 Steel tubes, 40 feet deep
  - Fuel destined for future disposal in geologic repository

Storage tubes being installed in underground vaults in the Canister Storage Building, 1999

The SNF Project Path Forward (continued)

Associated Tasks

- Cleaning K Basins water and removing sludge is an ongoing process throughout fuel retrieval and fuel-handling operations

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The Konan robotic arm of the K West Basin Fuel Retrieval system, being installed in K West Basin, July 1999

- When all the fuel is out of K Basins, transport leftover K Basins sludge to treatment process with similiar Hanford wastes
- Dispose of contaminated water and debris at Hanford using existing waste management systems
- Bring K Basins to safe, inexpensive, low maintenance state and turn over to Hanford's Environmental Restoration program for decommissioning